

Notice of Allowability

Application No.

10/693,874

Examiner

Nikita Wells

Applicant(s)

BATEMAN ET AL.

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Examiner's Amendment.
2. ☒ The allowed claim(s) is/are 1-108, 110-117, and 119-125.
3. ☒ The drawings filed on 28 October 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 080904
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 080904.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Nikita Wells
Primary Examiner
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Detailed Action

Examiner's amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Everett G. Diederiks, Jr. on August 9, 2004.

The Examiner initiated an interview with the Applicant in order to insert allowable material from dependent claims into the independent claims so that the application could be allowed. Claim 108 has been amended to add the subject matter of claim 109; claim 109 has been canceled; the dependency of claim 110 has been changed to 108; claim 114 has been placed in independent form by adding the subject matter from original claim 108; claim 117 has been amended to add the subject matter of claim 118; claim 118 has been canceled; the dependency of claim 119 has been changed to claim 117; and claim 123 has been placed in independent form by adding the subject matter from original claim 117.

2. The claims are amended as follows:

Claims 109 and 118 are canceled.

In claims 108 and 117, on line 4, the following has been added after "mass filter":

--wherein said mass filter comprises a plurality of electrodes wherein, in use, an AC or RF voltage is applied to said electrodes in order to radially confine ions within said mass filter--.

In claim 110, on line 1, "claim 109" has been changed to --claim 108--.

Claim 114 has been replaced by the following:

--A mass filter wherein ions separate within said mass filter according to their mass to charge ratio and assume different essentially static or equilibrium axial positions along the length of said mass filter, wherein once ions have assumed essentially static or equilibrium axial positions along the length of said mass filter at least some of said ions are then arranged to be moved towards an exit of said mass filter.--.

In claim 119, on line 2, "claim 118" has been changed to --claim 117--.

Claim 123 has been replaced by the following:

-- A method of mass to charge ratio separation comprising causing ions to separate within a mass filter and assume different essentially static or equilibrium axial positions along the length of the mass filter, wherein once ions have assumed essentially static or equilibrium axial positions along the length of said mass filter at least some of said ions are then arranged to be moved towards an exit of said mass filter.--.

Allowable Subject Matter

3. Claims 1-108, 110-117, and 119-125 are allowed.
4. The following is an examiner's statement of reasons for allowance:

With respect to the independent claims 1, 8, 16, 99-107, and the newly amended claims 108 and 117, prior art fails to disclose or make obvious a mass spectrometer comprising: a mass filter for separating ions according to their mass charge ratio, with the mass filter comprising at least seven electrodes wherein, in use, an AC or RF voltage is applied to said electrodes in order to radially confine ions within said mass filter and wherein in use one or more transient DC voltages or one or more transient DC voltage waveforms are progressively applied to said electrodes so that at least some ions having a first mass charge ratio are separated from other ions having a second different mass to charge ratio which remain substantially radially confined within said mass filter. With respect to the newly amended claims 114 and 123, prior art fails to

disclose or make obvious a mass filter and method of charge ratio separation wherein ions separate within said mass filter according to their mass to charge ratio and assume different essentially static or equilibrium axial positions along the length of said mass filter, wherein once ions have assumed essentially static or equilibrium axial positions along the length of said mass filter at least some of said ions are then arranged to be moved towards an exit of said mass filter.

The dependent claims 2-7, 9-15, and 17-97, are allowable by virtue of their dependence upon claims 1, 8, and 16, respectively. The dependent claims 10-13 and 116; 115; 119-122 and 125; and 124, are allowable by virtue of their dependence upon claims 108, 114, 117, and 123, respectively.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Giles et al. (2004/0031920 A1) disclose a mass spectrometer comprising an ion mobility separator having a plurality of electrodes and, wherein, one or more transient DC voltages or one or more transient DC voltage waveforms are progressively applied to said electrodes so that ions having a certain ion mobility are separated from other ions having different ion mobilities.

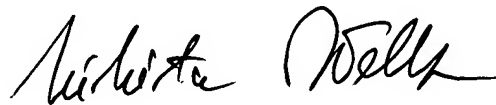
6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikita Wells whose telephone number is (571) 272-2484. The examiner can normally be reached on 8:30 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571) 272-

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2477. The central fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Nikita Wells". The signature is fluid and cursive, with the first name "Nikita" and the last name "Wells" clearly distinguishable.

Nikita Wells, Primary Examiner
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August 9, 2004